Fig.1

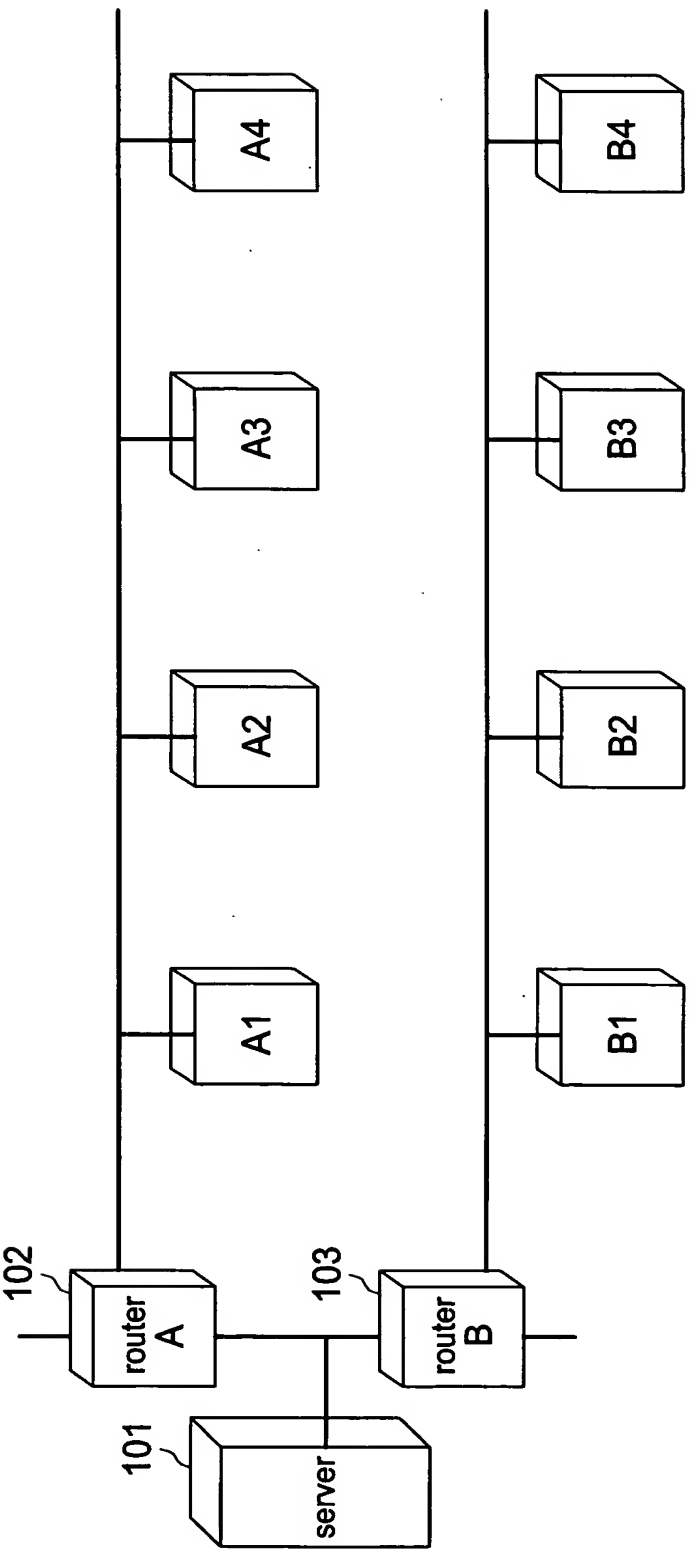


Fig.2

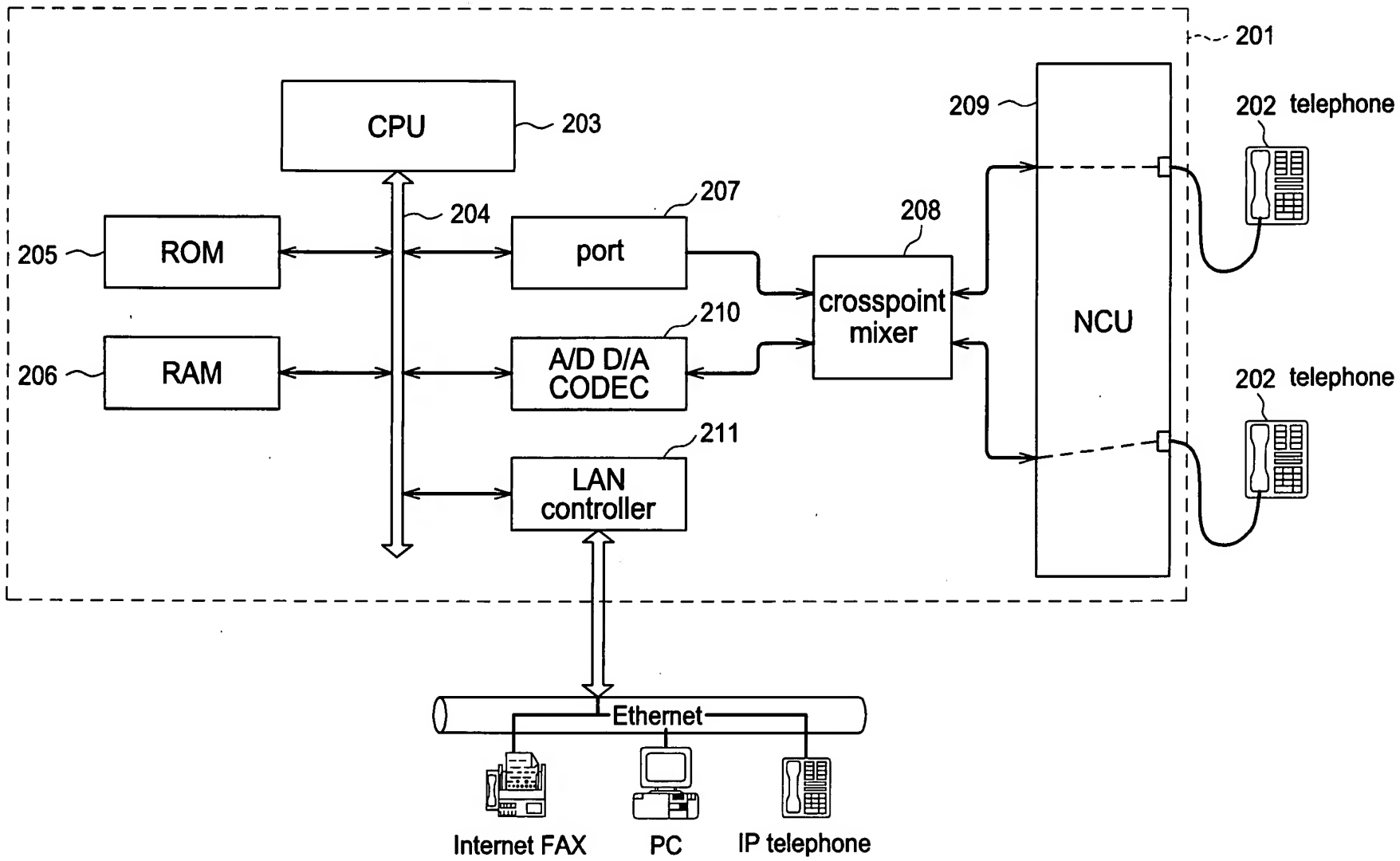

201
CPU
203
209
202 telephone
207
204
208
205
ROM
port
crosspoint mixer
NCU
210
206
RAM
A/D D/A CODEC
202 telephone
211
LAN controller
Ethernet
Internet FAX
PC
IP telephone

Fig.3

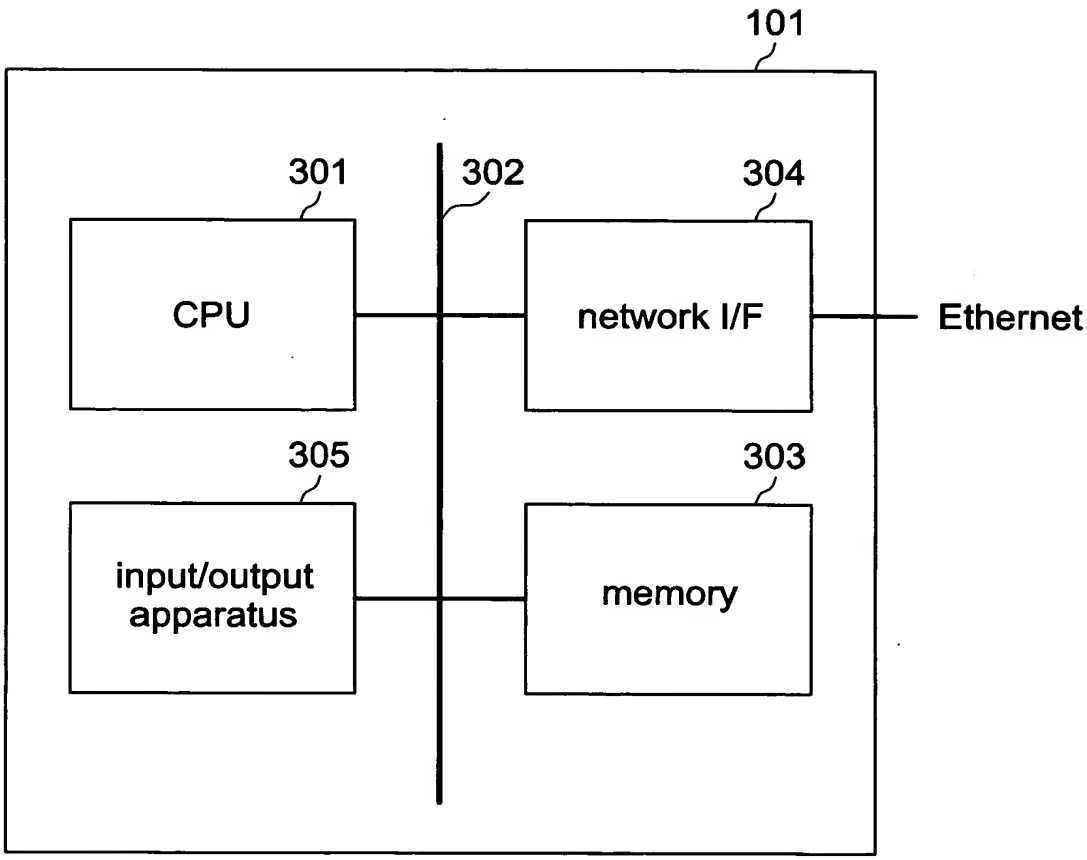

101
301
302
304
CPU
network I/F
Ethernet
305
303
input/output apparatus
memory

Fig.4(a)

group (A)management chart

terminal	telephone NO.	IP address
A1	1001	192.168.1.1
A2	1002	192.168.1.2
A3	1003	192.168.1.3
A4	1004	192.168.1.4
Agrp	1000	192.168.1.*

group (B)management chart

terminal	telephone NO.	IP address
B1	2001	192.168.2.1
B2	2002	192.168.2.2
B3	2003	192.168.2.3
B4	2004	192.168.2.4
Bgrp	2000	192.168.2.*

Fig.4(b)

group (A)management chart

terminal	telephone NO.	IP address
A1	1001	192.168.1.1
A2	1002	192.168.1.2
A3	1003	192.168.1.3
A4	1004	192.168.1.4
Agrp	1000	192.168.1.0/29

group (B)management chart

terminal	telephone NO.	IP address
B1	2001	192.168.1.65
B2	2002	192.168.1.66
B3	2003	192.168.1.67
B4	2004	192.168.1.68
Bgrp	2000	192.168.1.64/29

Fig.4(c)

group (A)management chart

terminal	telephone NO.	IP address
A1	1001	192.168.1.1/29
A2	1002	192.168.1.2/29
A3	1003	192.168.1.3/29
A4	1004	192.168.1.4/29
Agrp	1000	192.168.1.0/29

group (B)management chart

terminal	telephone NO.	IP address
B1	2001	192.168.1.65/29
B2	2002	192.168.1.66/29
B3	2003	192.168.1.67/29
B4	2004	192.168.1.68/29
Bgrp	2000	192.168.1.64/29

Fig.5

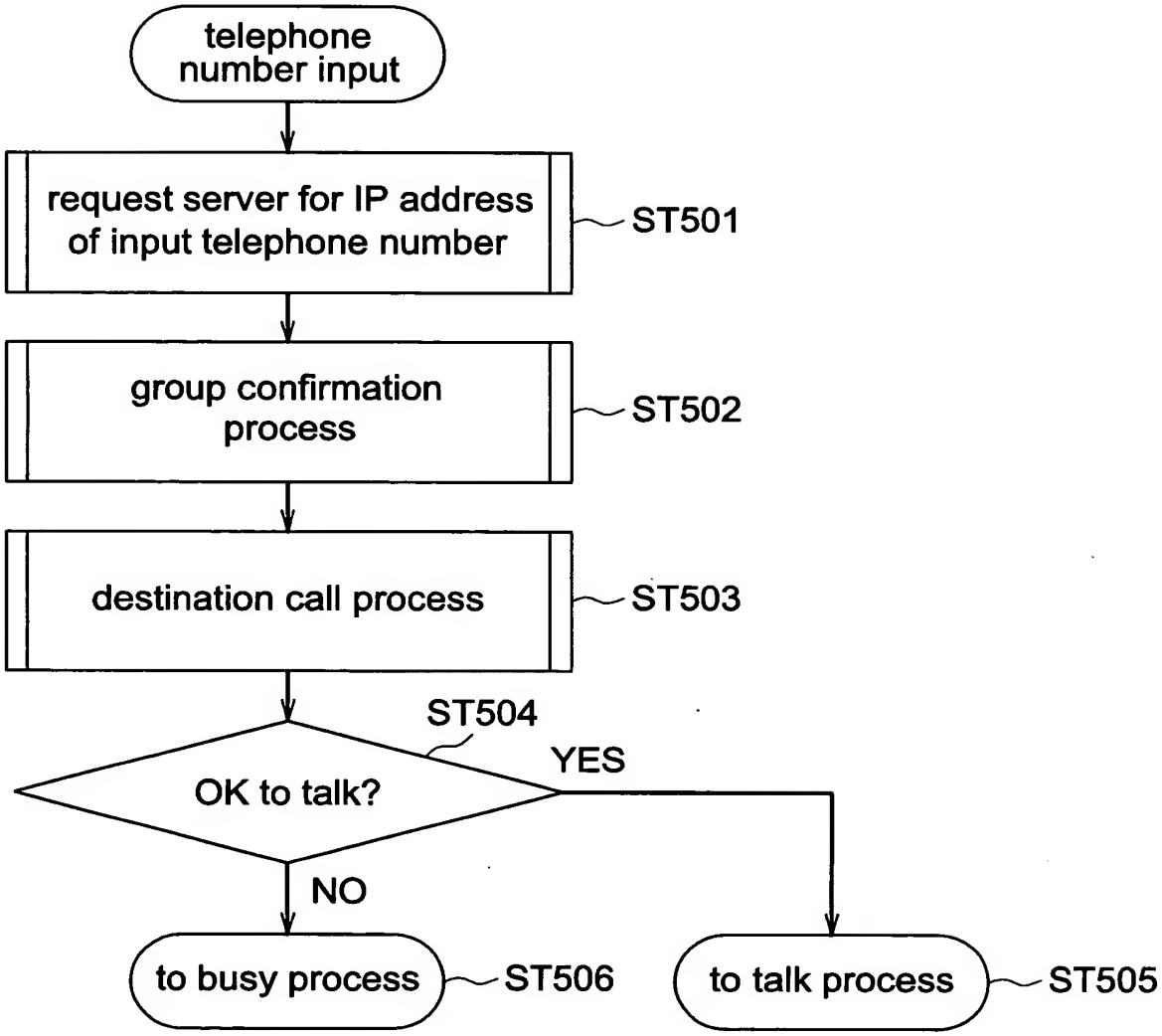

telephone number input
request server for IP address of input telephone number
ST501
group confirmation process
ST502
destination call process
ST503
ST504
OK to talk?
YES
NO
to busy process
ST506
to talk process
ST505

Fig.6

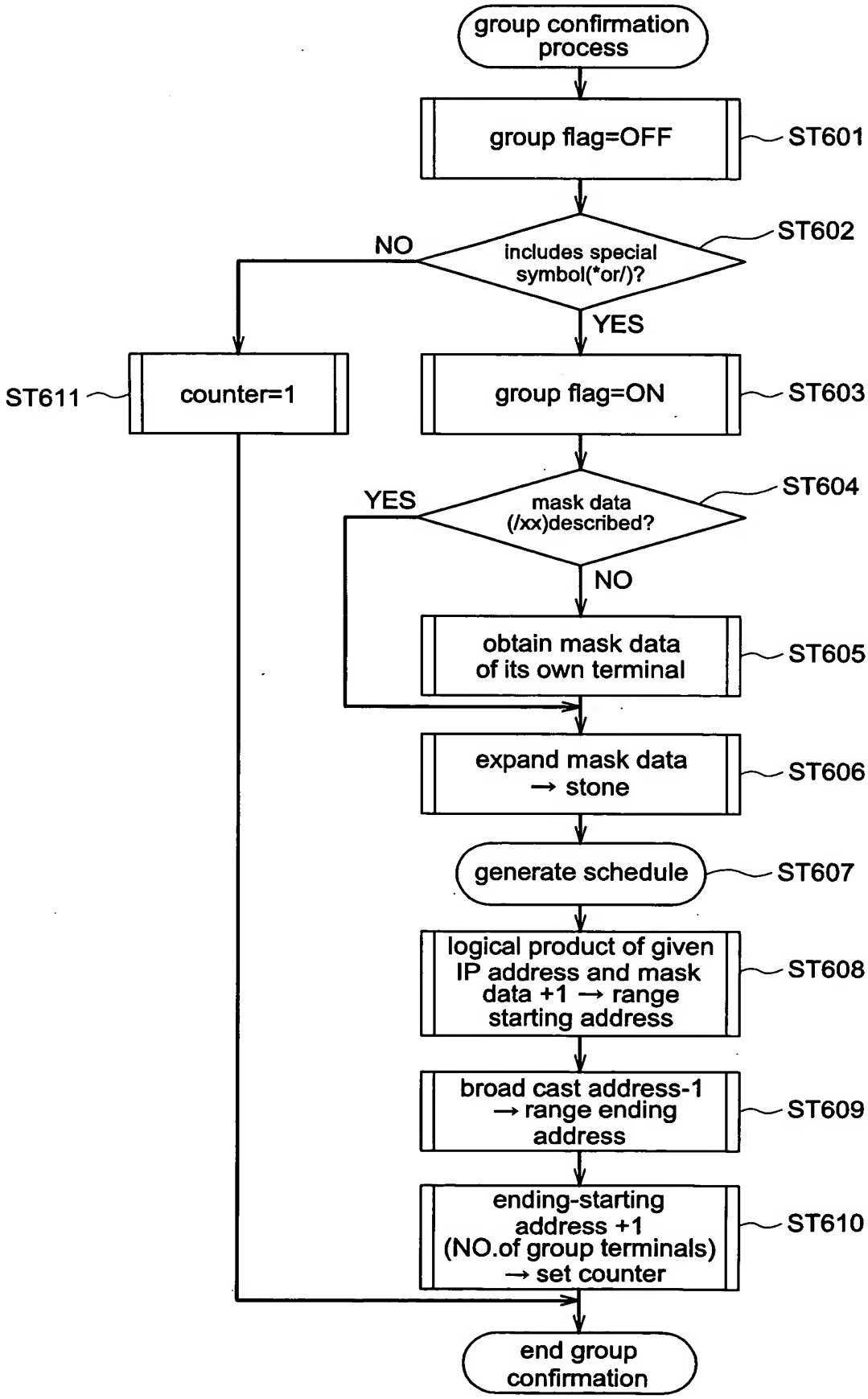

group confirmation process
group flag=OFF
ST601
includes special symbol(*or/)?
ST602
NO
YES
ST611
counter=1
group flag=ON
ST603
mask data (/xx)described?
ST604
YES
NO
obtain mask data of its own terminal
ST605
expand mask data → stone
ST606
generate schedule
ST607
logical product of given IP address and mask data +1 → range starting address
ST608
broad cast address-1 → range ending address
ST609
ending-starting address +1 (NO.of group terminals) → set counter
ST610
end group confirmation

Fig.7

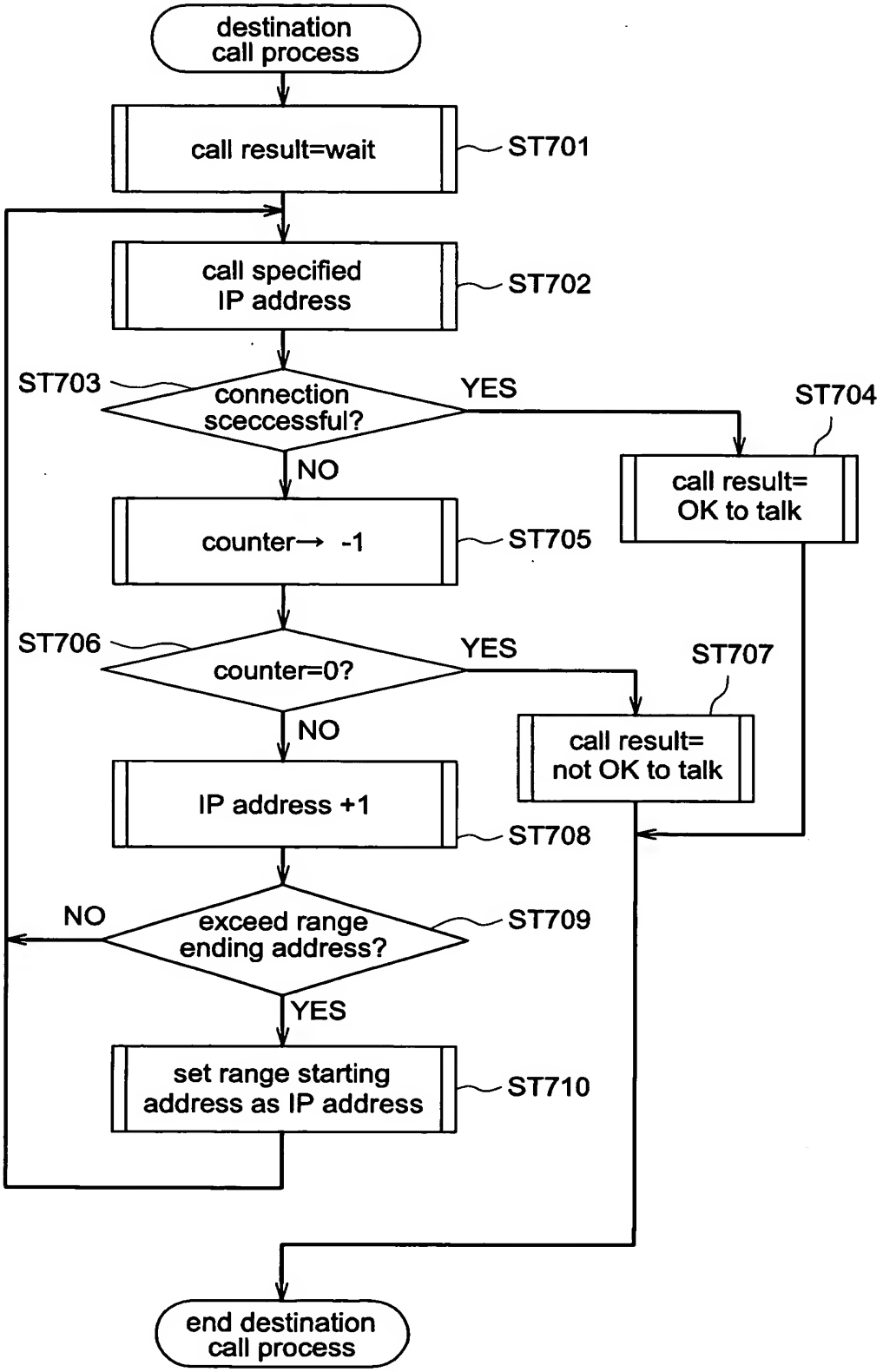

destination call process
call result=wait
ST701
call specified IP address
ST702
ST703
connection sceccessful?
YES
ST704
NO
call result= OK to talk
counter→ -1
ST705
ST706
counter=0?
YES
ST707
NO
call result= not OK to talk
IP address +1
ST708
NO
exceed range ending address?
ST709
YES
set range starting address as IP address
ST710
end destination call process

Fig.8

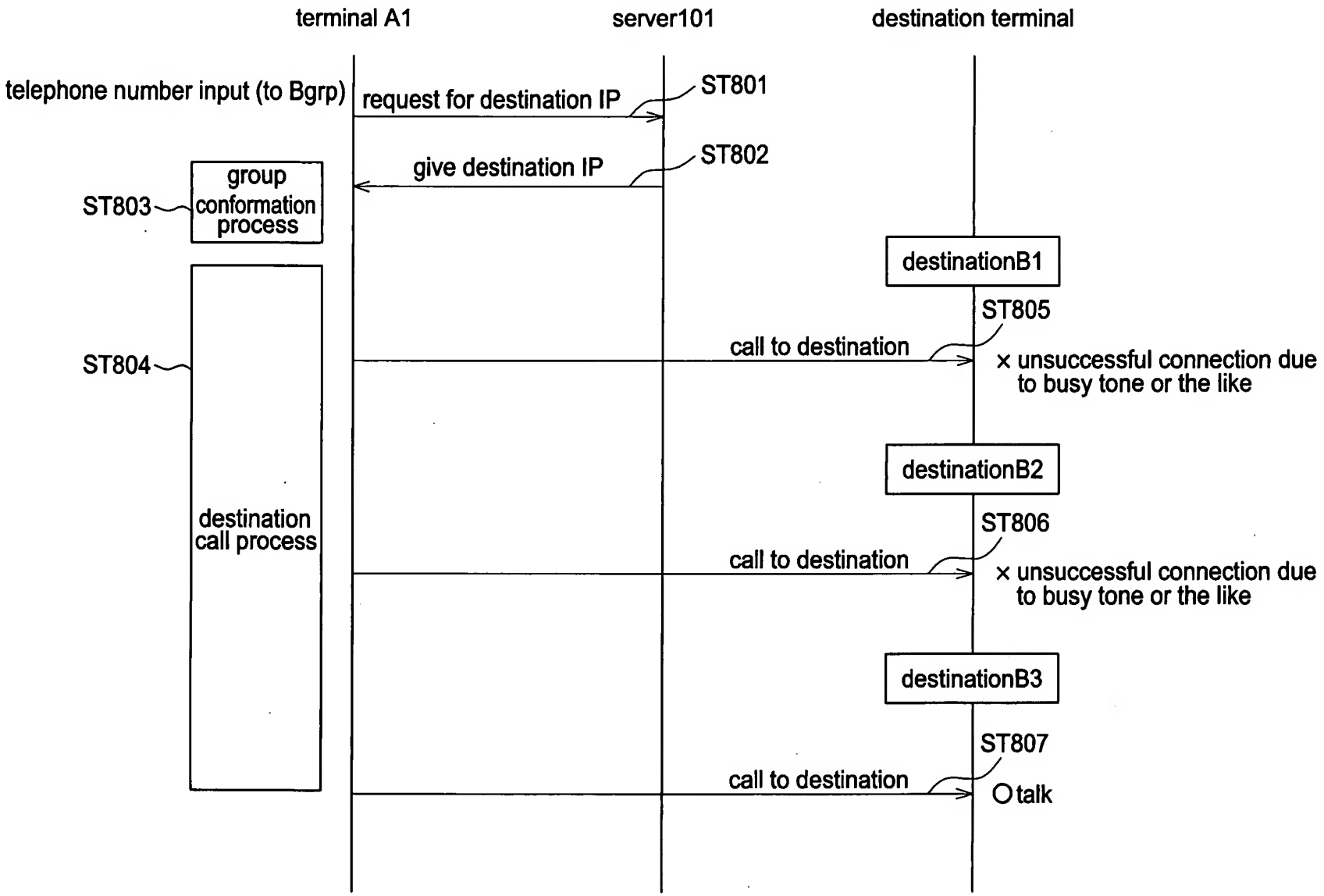

terminal A1
server101
destination terminal
telephone number input (to Bgrp)
request for destination IP
ST801
give destination IP
ST802
ST803
group conformation process
destinationB1
ST805
ST804
call to destination
× unsuccessful connection due to busy tone or the like
destination call process
destinationB2
ST806
call to destination
× unsuccessful connection due to busy tone or the like
destinationB3
ST807
call to destination
O talk

Fig.9(a)

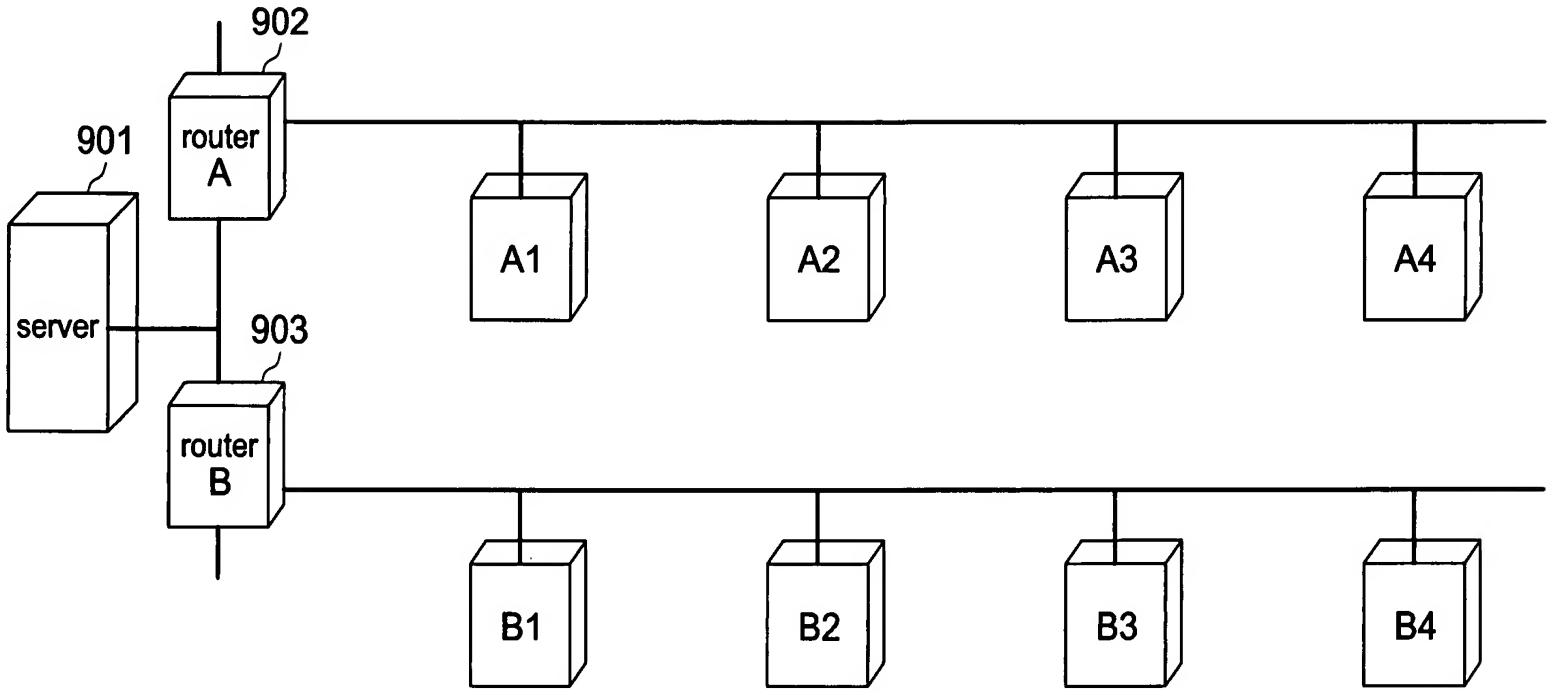


Fig.9(b)

group (A)management chart

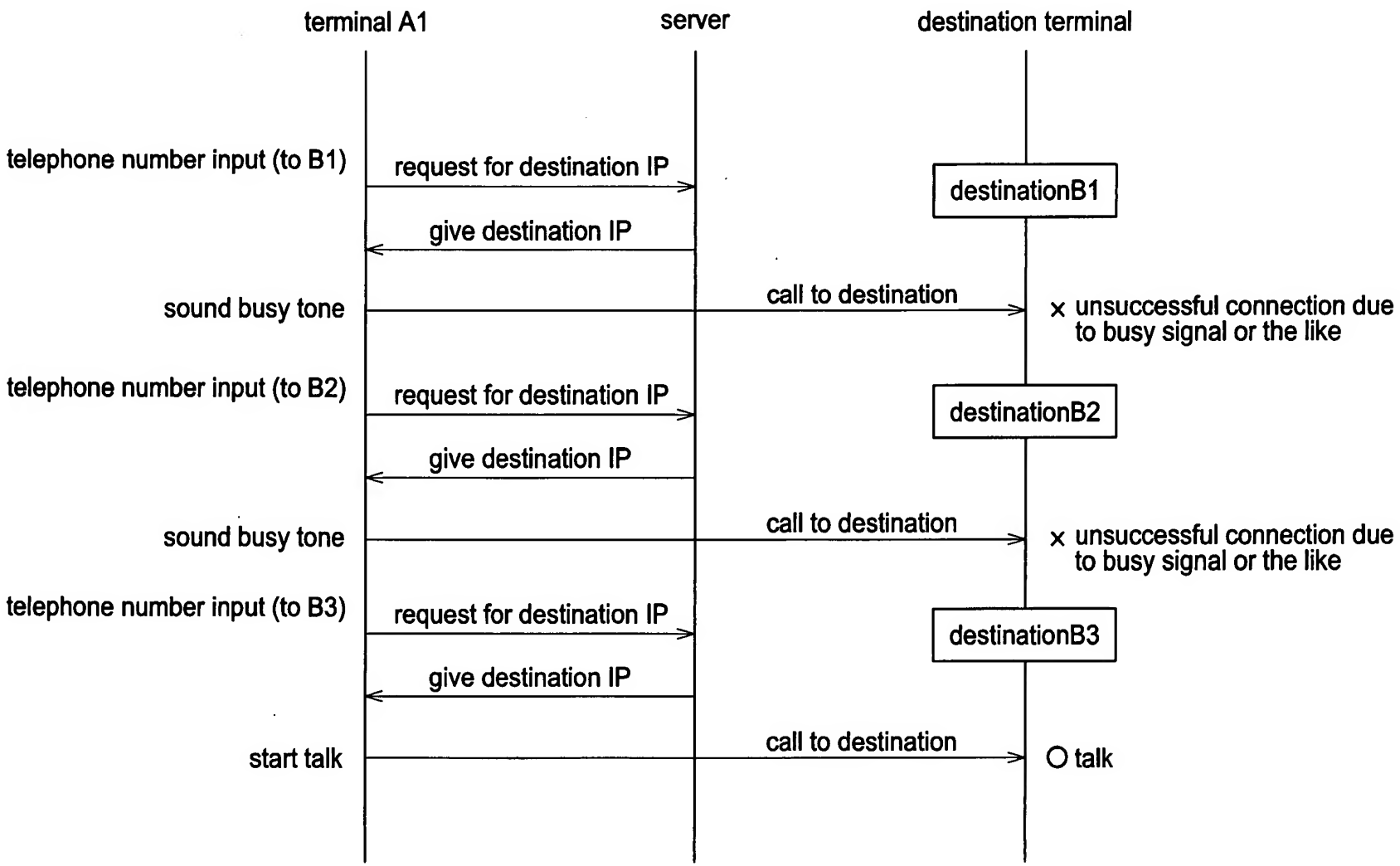
terminal	telephone NO.	IP address
A1	1001	192.168.1.1
A2	1002	192.168.1.2
A3	1003	192.168.1.3
A4	1004	192.168.1.4

Fig.9(c)

group (B)management chart

terminal	telephone NO.	IP address
B1	2001	192.168.2.1
B2	2002	192.168.2.2
B3	2003	192.168.2.3
B4	2004	192.168.2.4

Fig.10


terminal A1
server
destination terminal
telephone number input (to B1)
request for destination IP
destinationB1
give destination IP
sound busy tone
call to destination
× unsuccessful connection due to busy signal or the like
telephone number input (to B2)
request for destination IP
destinationB2
give destination IP
sound busy tone
call to destination
× unsuccessful connection due to busy signal or the like
telephone number input (to B3)
request for destination IP
destinationB3
give destination IP
start talk
call to destination
O talk